

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

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Listing of Claims:

1 - 4 (Canceled).

5. (Currently Amended) A liquid chromatograph pump comprising:
an upstream-side plunger pump as a first pump and a downstream-side
plunger pump as a second pump, said first and second pumps being connected
fluidly in series;
a first motor for driving a plunger of the first pump and a second motor for
driving a plunger of the second pump whereby the plunger of the first pump and the
plunger of the second pump may be driven at different speeds from each other;
a first check valve arranged at an upstream side with respect to the first pump
to prevent a liquid from flowing from the first pump to the upstream side with respect
to the first pump when the plunger of the first pump moves forward to pressurize the
liquid in the first pump, and to allow the liquid to flow toward the first pump from the
upstream side with respect to the first pump when the plunger of the first pump
moves backward to take the liquid into the first pump;
a second check valve arranged between the first and second pumps to
prevent the liquid from flowing from the second pump toward the first pump when
the plunger of the first pump moves backward to take the liquid into the first pump

and the plunger of the second pump moves forward to pressurize the liquid in the second pump, and to allow the liquid to flow from the first pump toward the second pump when the plunger of the second pump moves backward to take the liquid into the second pump and the plunger of the first pump moves forward to pressurize the liquid in the first pump to make a flow rate of the liquid discharged from the first pump greater than a flow rate of the liquid taken into the second pump; and

~~A liquid chromatograph pump as set forth in claim 11, further comprising~~

first and second cylinders and said first and second plungers to form said first and second pumps, and a stepped part being formed at least on an outer peripheral surface of the second plunger in the second pump, along a driving direction of the second plunger so as to define a working chamber between the stepped part and an inner wall surface of the second cylinder,

wherein one end part of the second plunger on a side remote from a drive side is exposed to a gas atmosphere.

6. (Currently Amended) A liquid chromatograph pump comprising:

an upstream-side plunger pump as a first pump and a downstream-side plunger pump as a second pump, said first and second pumps being connected fluidly in series;

a first motor for driving a plunger of the first pump and a second motor for driving a plunger of the second pump whereby the plunger of the first pump and the plunger of the second pump may be driven at different speeds from each other;

a first check valve arranged at an upstream side with respect to the first pump to prevent a liquid from flowing from the first pump to the upstream side with respect

to the first pump when the plunger of the first pump moves forward to pressurize the liquid in the first pump, and to allow the liquid to flow toward the first pump from the upstream side with respect to the first pump when the plunger of the first pump moves backward to take the liquid into the first pump;

a second check valve arranged between the first and second pumps to prevent the liquid from flowing from the second pump toward the first pump when the plunger of the first pump moves backward to take the liquid into the first pump and the plunger of the second pump moves forward to pressurize the liquid in the second pump, and to allow the liquid to flow from the first pump toward the second pump when the plunger of the second pump moves backward to take the liquid into the second pump and the plunger of the first pump moves forward to pressurize the liquid in the first pump to make a flow rate of the liquid discharged from the first pump greater than a flow rate of the liquid taken into the second pump; and

~~A liquid chromatograph pump as set forth in claim 11, further comprising~~

first and second cylinders and said first and second plungers to form said first and second pumps, and a stepped part being formed at least on an outer peripheral surface of the second plunger in the second pump, along a driving direction of the second plunger so as to define a working chamber between the stepped part and an inner wall surface of the second cylinder,

wherein one end part of the second plunger on a side remote from a drive side is exposed to a gas atmosphere, the working chamber in the second pump is connected with a discharge passage from the liquid chromatograph pump, and a working chamber defined in the first pump is connected with a suction passage connected to the liquid chromatograph pump.

7. (Currently Amended) A liquid chromatograph pump as set forth in claim 5 or 6, further comprising:

an eluent holding container for holding eluent to be fed by the liquid chromatograph pump, a low pressure pump being provided between the eluent holding container and the first pump, a change-over valve, a passage communicated to the eluent holding container and a passage communicated to a column being provided on the downstream side of the second pump,

wherein the low pressure pump is operated so as to feed liquid at a large flow rate in order to fill the eluent in the passages on the downstream side while discharging air bubbles remaining in the pumps and the passages, and thereafter, the change-over valve is connected to the passage communicated to the column, and then a trace of the eluent is fed by the first pump and the second pump.

8. (Canceled).

9. (Currently Amended) A liquid chromatograph pump as set forth in ~~claim 11~~ claim 5, wherein a liquid flow rate range is from about 0.1 nL/min to 50 μ L/min.

10-11. (Canceled).